

**SULFONATED ARYL SULFONATE MATRICES
AND METHOD OF PRODUCTION**

Related Application

5 [0001] This application is a continuation of Application No. 09/563,143,
filed May 2, 2000, now abandoned.

Field of the Invention

10 [0002] The present invention relates to matrices comprising sulfonated aryl
sulfonate polymers and methods for preparing them. In particular, the invention relates
to the use of a sulfonating solvent to make a sulfonated aryl sulfonate polymer solution,
which is then cast as a wet film from which the matrix is coagulated.

Background of the Invention

15 [0003] Polymeric matrices, including porous matrices and membrane
matrices, are well known in the art. Membrane matrices are used in a variety of
filtration applications, such as purification and testing in the food and beverage industry,
water treatment, pharmaceuticals, and in medical laboratories. Porous matrices have
become increasingly relevant to the testing industry for uses including medical
diagnostics, e.g., glucose monitoring test strips.

20 [0004] Most polymeric matrices are generally made by first preparing a
casting solution made up of the chosen polymer in a suitable solvent. The casting dope
is then formed into a thin sheet and the polymer is precipitated or coagulated into a solid
phase. Precipitating or coagulating the polymer into a solid porous matrix or membrane
matrix is normally carried out by evaporating the solvent or contacting the polymer with
a non-solvent liquid in a coagulation bath. By varying the composition of the polymer or
25 casting solution, or the process conditions, matrices having varying morphology,
porosity, and performance characteristics are produced.

30 [0005] In producing the matrices of the present invention, various
technologies come into play. These include the dissolution of polymers in sulfonating
solvents, the use of sulfonated polymers to make matrices, and the use of acid-type
solvents for making matrices.